

Remarks

Specification

The Examiner objects to the abstract of the disclosure “ because it lacks organization for the apparatus as stated above and it contains terms not common in the art; I.e. synchronized chirp hyperthermia. Correction is required.”

Applicant has amended the abstract by deleting the terms objected to by the Examiner and inserting the organization and operation of the apparatus as described on page 4, second paragraph of the Application.

The disclosure is objected to because the Examiner contends “ on page 8, second paragraph, reference is made to a non-contact cooling using needles inserted into the tissue. The needles cannot be inserted without contacting tissue.”

Applicant has amended the disclosure on page 8, second paragraph by deleting “ such non-contact” and inserting - - target tissue - - .

In view of the above amendments to the disclosure, reconsideration of the objections to the disclosure and favorable action is respectfully requested.

Claim Objections

Claim 23 is objected to because the Examiner contends “ a pulsing of the tissue temperature results from controlling the energy output. Pulsing the temperature is not a well defined step.”

Applicant has deleted the term “ pulsating” from Claim 23 and inserted - - increasing and decreasing - - instead.

Claims 2 - 5, 16 - 19, and 21 - 22 are objected to by the Examiner “ as being of Improper dependent form for failing to further limit the subject matter of a previous claim.”

Applicant has amended Claims 2 - 5, 16 - 19, and 21 - 22 to further limit them to the subject matter of a previous claim.

In view of the above amendments to the Claims, reconsideration of the objections to the Claims and favorable action is requested.

Claim Rejections - 35 USC 102

Claims 1 - 11 and 15 - 22 are rejected under 35 USC 102 (e) as being anticipated by U.S. Pat. No. 6,506,189 to Rittman et al. This rejection is traversed in view of the amended claims and the following argument.

Rittman et al. disclose forms of cooled tip, high frequency, electrodes adapted to produce large lesions in tumors, specifically “ a need [that] exists for the capability to heat such tumors destructively with a minimum number of electrode insertions and heating episodes.” (column 2, lines 26-29, emphasis added). Applicant submits that the apparatus described in Rittman et al. is specifically adapted to ablate a tumor by heating such tumors destructively or until substantially all cells in and around the tumor are destroyed.

Unlike Rittman et al. Claims 1-11 and 15-19 are limited to Apparatus adapted “ to cause necrosis of selected cells in said target tissue.” (amended Claim 1), and “ for causing necrosis of only said diseased cells.” (amended Claim 16). Claims 20 - 22 are limited to Apparatus adapted “for selectively affecting tissue cells containing one or more defective proteins.” There is nothing disclosed in Rittman et al that anticipates necrosis of selected cells. The apparatus disclosed in Rittman et al. is specifically adapted to destroy all cells in a tumor.

For the foregoing reasons, Applicant respectfully submits that amended Claim 1 - 11, 15 -19 and 20 - 22 are in condition for allowance.

Claim 23 is rejected under 35 USC 102 (b) as being anticipated by U.S. Pat. No. 5,891,134 to Goble et al.. Applicant submits that Goble et al. teaches a technique for thermal treatment of a variety of tissue in applications where controlled application of heat is desired. In particular, Goble et al. states “ There is a need to improve heated fluid systems to provide rapid and uniform heating while at the same time allowing a user to monitor and control the fluid temperature.” (column 1, lines 46 - 50, emphasis added). There is nothing disclosed in Goble et al that anticipates the step of “ increasing and decreasing said target tissue temperature over a predetermined period of time to selectively cause necrosis of substantially only said diseased cells.” (Claim 23, emphasis added).

For the foregoing reason, Applicant respectfully submits amended Claim 23 is in condition for allowance.

Claim Rejections - 35 USC 103

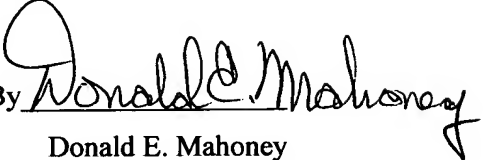
Claims 12 - 14 are rejected under 35 USC 103 (a) as being unpatentable over U.S. Pat. No. 6,506,189 to Rittman et al. in view of U.S. Pat. No. 5,891,134 to Goble et al.

Applicant contends that Claims 12- 14 are dependent on amended Claim 1, and that the several claimed electrode configurations are included in apparatus comprising " means for controlling said plurality of energy pulses to assist in pulsating said target tissue temperature over a predetermined period of time to cause necrosis of selected cells in said target tissue." (amended Claim 1, emphasis added).

Nothing disclosed in Rittman et al. or in Goble et al. whether viewed separately or in combination obviate Claims 12 - 14.

For the foregoing reasons, Applicant respectfully submits that Claims 12 - 14 are not obvious over Rittman et al. in view of Goble et al. and reconsideration of the rejection is respectfully requested.

Respectfully Submitted,

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